

CLAIMS

What is claimed is:

1. A compressor comprising:

an electric motor having a stator and a rotor, said rotor driving a shaft for rotation, and said motor being mounted in a chamber, said chamber including a suction inlet for receiving a fluid to be compressed, such suction inlet passing said fluid to be compressed over said motor to cool said motor;

a compressor housing, said compressor housing being mounted adjacent to said motor housing, said compressor housing including a compressor pump unit driven by said shaft to compress a fluid, and said compressor housing including a chamber for receiving refrigerant from said motor chamber to be compressed by said compressor pump unit; and

said shaft including a bearing mounted at an end of said motor rotor adjacent to said compressor housing, and a mount for said bearing, said mount including an oil return passage for returning lubricant from said bearing toward an end of said bearing spaced away from said motor.

2. A compressor as set forth in claim 1, wherein said compressor pump unit includes reciprocating pistons movable within said chambers, and a lubricant supply system is included for supplying the lubricant to said shaft.

3. A compressor as set forth in claim 2, wherein said compressor housing is separated from said motor housing by said mount, said mount including drain passages for guiding said returned lubricant away from said motor rotor.
4. A compressor as set forth in claim 3, wherein said bearing is provided with a notch for supplying lubricant through said bearing to said mount, said mount being provided with a drain passage for directing lubricant to said end of said bearing remote from said motor rotor.
5. A compressor as set forth in claim 4, wherein a notch is formed in said mount at an end of said drain passage remote from said motor rotor, said notch being formed in an end face of said mount, and further assisting the flow of lubricant away from said motor rotor.
6. A compressor as set forth in claim 5, wherein a thrust bearing is positioned at an end of said mount adjacent to said notch.
7. A compressor as set forth in claim 6, wherein said thrust bearing is provided with a notch, said thrust bearing notch cooperating with said mount notch to further ensure lubricant is supplied to said second end of said bearing.
8. A compressor as set forth in claim 1, wherein an oil seal is positioned at a second end of said bearing spaced towards said motor.

9. A compressor comprising:

an electric motor having a stator and a rotor, said rotor driving a shaft for rotation, and said motor being mounted in a sealed chamber, said chamber including a suction inlet for receiving a fluid to be compressed, such suction inlet passing said fluid to be compressed over said motor to cool said motor;

a compressor housing, said compressor housing being mounted adjacent to said motor housing, said compressor housing including a compressor pump unit with reciprocating pistons driven by said shaft to compress a fluid, and said compressor housing including a suction plenum for receiving refrigerant from said motor chamber for delivery to chambers associated with said pistons; and

a lubricant supply for supplying lubricant to said shaft, said shaft including a bearing mounted at an end of said motor rotor adjacent to said compressor housing, such that said bearing is intermediate said compressor pump unit and said motor rotor, and a mount for said bearing, said mount including an oil return passage for returning lubricant from said bearing towards an end of said bearing spaced away from said motor.

10. A compressor as set forth in claim 9, wherein said compressor housing is separated from said motor housing by said mount, said mount including drain passages for guiding said returned lubricant away from said motor rotor.

11. A compressor as set forth in claim 10, wherein said bearing is provided with a notch for supplying lubricant through said bearing to said mount, said mount being provided with a drain passage for directing lubricant to said end of said bearing remote from said motor rotor.

12. A compressor as set forth in claim 11, wherein a notch is formed in said mount at an end of said drain passage remote from said motor rotor, said notch being formed in an end face of said mount, and further assisting the flow of lubricant away from said motor rotor.
13. A compressor as set forth in claim 12, wherein a thrust bearing is positioned at an end of said mount adjacent to said notch.
14. A compressor as set forth in claim 13, wherein said thrust bearing is provided with a notch, said thrust bearing notch cooperating with said mount notch to further ensure lubricant is supplied to said second end of said bearing.
15. A compressor as set forth in claim 9, wherein an oil seal is positioned at a second end of said bearing spaced towards said motor.